



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,267	12/02/2003	Edmund Schuller	S&S-1202A	3358
22827	7590	10/19/2010		
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			EXAMINER LANGDON, EVAN H	
			ART UNIT 3654	PAPER NUMBER
			MAIL DATE 10/19/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/726,267

Applicant(s)

SCHULLER ET AL.

Examiner

EVAN H. LANGDON

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25, 26, 30-32, 36, 38-40 and 47-69 is/are pending in the application.
- 4a) Of the above claim(s) 25, 26, 31, 32, 36, 47 and 48 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-40 is/are allowed.
- 6) ☒ Claim(s) 49-61, 63 and 65-69 is/are rejected.
- 7) ☒ Claim(s) 62 and 64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 49- 52, 56, 57 and 67-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima (US 5,276,460) in view of Labesky (US 5,833,776).

Miyajima disclose a friction ring for friction driving a roll; a friction roll 32 defining axial and radial directions, the friction roll comprising at least one rotatable roll body 32 for driving the spool, the at least one rotatable roll body 32 having a body width along the axial direction and having at least two portions, one portion 3₂ with a radius of r₁ (D₂) and another portion 32 with a radius of r₂ (D₃), wherein the radius r₁ (D₂) is less than the radius r₂ (D₃) (see Fig. 3), the friction ring comprising:

a belt 3 (radius D₁, col. 2 ll. 53-58) having a belt width that is less than the body width of the at least one rotatable body; the belt being positioned upon the portion 3₂ of the rotatable roll body having a radius of r₁ (D₂).

Miyajima fails to show the belt 3 removable by having two open ends bound together by a fastening apparatus.

Labesky teaches a flexible ring 10 with ring fastening means in general having two open ends bound together by a fastening apparatus 24, 26. The recitation with respect to the manner in which a claimed apparatus is intended to be employed does

not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the friction belt of Miyajima to include a fastening means general having two open ends bound together by a fastening apparatus as suggested by Labesky, to more easily remove the friction belt of Miyajima.

In regard to claims 50 and 51, Miyajima as modified by Labesky teaches the fastening apparatus comprises two connectors 24, 26, whereby one of the connectors is secured to each of the connectors is secured to each of the open ends of the friction ring, where the connectors include hooks (Labesky Fig. 1 and 2) that connect by radial movement relative to each of the ends.

In regard to claim 56, Miyajima as modified by Labesky teaches the friction ring 3 is constructed with a curvature that conforms to the curvature of the at least one rotatable roll body.

In regards to claims 57, Miyajima as modified by Labesky teaches the ends of the friction ring are joined by an adhesive (Labesky, col. 9 lines 11-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fastening ends of Miyajima as modified by Labesky to include an adhesive joining the interlocking elements as suggested by Labesky, to secure the engagement of the interlocking elements.

In regard to claims 67 and 69, Miyajima as modified by Labesky teaches an apparatus for friction driving a spool on a textile machine, the apparatus comprising: a

friction roll 32 having at least one rotatable roll body 32 disposed thereon, the rotatable roll body having a portion 3₂ with a radius of r₁ (D₂) that is axially adjacent to a portion with radius r₂, wherein radius r₁ is less than radius r₂; a friction ring carried on the portion of the rotatable roll body having a radius of r₁, the friction ring positioned axially adjacent to the portion portion 32 with a radius of r₂ (D₃), the friction ring configured as a flexible belt 32 with two ends 24, 26 (Labesky); and a fastening device 24, 26 (Labesky) that binds together the two ends of the friction ring.

In regard to claim 68, Miyajima as modified by Labesky teaches the fastening device 24, 26 (Labesky) creates a joint that extends along the axial direction of the rotatable body and across the entire width of the flexible belt (Fig. 1, Labesky) when the fastening device 24, 26 (Labesky) binds the two ends of the belt together.

Claims 53-55 and 58 rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima in view of Labesky as applied to claim 49 above, and further in view of Burke et al. (US 5,507,226).

Burke teaches a friction roll having a friction ring 14 constructed from elastic material (col. 3 ll. 64 to col. 4 ll. 62, Burke) and an auxiliary fastener (col. 4 ll. 49-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the belt of Miyajima in view of Labesky to include an elastic material as suggested by Burke to increase the coefficient of friction, since combining prior art elements according to known methods will yield predictable results.

Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima as modified by Labesky as applied to claim 49 above, and further in view of Smith (US 1,554,253).

Smith teaches a friction belt having plurality of grooves 33 oriented perpendicular to the length of the belt. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the belt of Miyajima to include grooves oriented perpendicular to the length of the belt as suggested by Smith to better grip the material, since all of the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Claims 60, 63 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burke et al (US 5,507,226) in view of Labesky (US 5,833,776).

Burke discloses an apparatus for friction driving a spool, the apparatus comprising a friction roll having at least one rotatable roll body 12 disposed thereon; and a friction ring 14 carried on the rotatable roll body, the friction ring comprising a belt that is removable and constructed from an elastic strip of flexible material(col. 3 ll. 64 to col. 4 ll. 62, Burke)

Burke fails to show the friction ring 14 removable by having two open ends bound together by a fastening apparatus.

Labesky teaches a ring 10 with ring fastening means in general having two open ends bound together by a fastening apparatus 24, 26, the two ends connected or

separated from each other by displacement of the one end relative to the other along a radial direction of the roll body. The recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. *Ex parte masham*, 2 USPQ 2d 1647 (1987).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the friction ring of Burke to include a fastening means general having two open ends bound together by a fastening apparatus as suggested by Labesky, to more easily remove the friction ring of Burke.

In regard to claim 63, the limitation that the cross-section is about constant when subject to a tensile force equal to that of installation on the roll body and where the ring exhibits a width that diminishes with increasing distance from the ends of the friction ring when no tensile force is acting on the friction ring are properties that are inherent to an elastic material that is ring shaped and subject to a tensile force.

In regard to claim 66, Burke as modified by Labesky teaches the fastening apparatus comprises two connectors 24, 26, whereby one of the connectors is secured to each of the connectors is secured to each of the open ends of the friction ring, where the connectors include hooks (Labesky Fig. 1 and 2) that connect by radial movement relative to each of the ends.

Claims 61 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burke in view of Labesky as applied to claim 60 above, and further in view of Smith.

Smith teaches the axial position of the at least one belt along the rotatable roll body is maintained by differences in the radius of the rotatable roll body and a plurality of grooves 33 oriented perpendicular to the length of the belt.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the roll body of Burke in view of Labesky to include different radii to hold the belt in its axial position and to have a plurality of grooves for gripping as suggested by Smith, since all of the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Allowable Subject Matter

Claims 38-40 are allowed.

Claims 62 and 64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 20 August 2010 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., Miyajima does not carry sheet 11 on the smaller radius portion 3₂) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Though this feature is not claimed, Miyajima does teach sheet 11 carried on the smaller radius portion 3₂. As shown in Fig. 2, sheet 11 is carried by friction surface 3. Friction surface 3 is a belt that is positioned on smaller radius portion 3₂.

Applicant argues that "[i]dler 32 includes a larger portion 3₁ having a diameter portion D₁ and a smaller portion 3₂ having a smaller diameter D₂." Response at 9. This is incorrect. As clearly shown in Fig. 2 and described in col. 3 ll. 1-6, the diameter of idler 32 is D₃ and stepped roller 3 includes a larger portion 3₁ having a diameter portion D₁ and a smaller portion 3₂ having a smaller diameter D₂.

Applicant argues that "Lablesky does not teach connection of its ends by a radial or non-axial movement." Response at 10-11. However, the Applicant has not provided support for this argument. Lablesky does not specifically disclose the directional movement of the ends of body 10 when joining ends 20 and 22. However, based on the disclosure on a whole including Figs. 1, 2 and 16-23, it is obvious that Lablesky contemplated both radial and non-radial movement as well as axial and non-axial movement.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant argues that "Smith does not disclose a flexible belt located on a portion of a roll body having a radius R1 that is less than a radius r2 of another portion of that roll body. However, Smith is only relied upon to teach a friction belt having plurality of grooves 33 oriented perpendicular to the length of the belt.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EVAN H. LANGDON whose telephone number is 571-272-7057. The examiner can normally be reached on Monday through Friday, 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mansen can be reached on 571-272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/EVAN H LANGDON/
Primary Examiner, Art Unit 3654
18 October 2010